

Appl. No. : 10/772,049
Filed : February 4, 2004

REMARKS

Claim 1 has been amended and new Claims 25-30 have been added. Accordingly, Claims 1-30 remain pending in the present application. Support for the amendments is found in the Specification and claims as filed, in particular in Paragraphs [0079] and [0082]. Accordingly, the amendments do not constitute the addition of new matter. Reconsideration of the application in view of the foregoing amendments and following comments is respectfully requested.

Rejections under 35 U.S.C. § 103

The Examiner rejected Claims 1-24 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,225,678 (Roy) alone, or in view of U.S. Patent No. 5,965,626 (Tzeng et al.). Roy discloses a process for manufacturing a foamed polymeric material. Tzeng et al. discloses operations for forming a roofing tile or ridge cap.

According to M.P.E.P. 2143.03, "[t]o establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art."

According to the Examiner, Roy discloses a process for preparing asphaltic foams prepared by preparing molten asphalt and combining it with urethane forming reactants. The Examiner acknowledges that Roy differs from the present application in that the order of mixing the asphalt component is not specified as to require addition to the isocyanate component first.

Amended Claim 1 recites, *inter alia*, "forming a second intermediate mixture comprising one or more polyols, a blowing agent, and a surfactant, wherein the second intermediate mixture is segregated from the first intermediate mixture." (Emphasis added.) This segregation of the first and second intermediate mixtures is neither taught nor suggested by the prior art references.

Moreover, this initial segregation provides an important unexpected advantage. Paragraph [0079] states that

The foaming reaction begins as soon as the isocyanate is mixed with the remaining ingredients of the reaction mixture. With segregating polyisocyanate from polyol within Mixture A and Mixture B respectively, the foaming reaction can be controlled with mixing of Mixture A (containing polyisocyanate) and Mixture B (containing polyols). With a more controlled foaming reaction, there is less loss of the blowing agent which is able to evaporate otherwise.

Furthermore, Paragraph [0082] states that "[o]ne of the great advantages of the present process is that it can be performed under the foregoing conditions, which are sufficiently controlled to be

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useful in a manufacturing process.” The controlled reaction includes obtaining conditions such that the final reaction mixture does not expand beyond a form desired in the final molded asphaltic foam or cure before taking on said form, as stated in Paragraph [0080] and recited in amended Claim 1.

Roy does not segregate isocyanates from the remaining ingredients. In the procedures outlined in Roy, the ingredients, including isocyanates and polyols, are merely combined together. Roy describes the combination step at column 4, lines 58-64. Accordingly, Roy does not disclose precautions to be taken, as recited in amended Claim 1, namely segregating isocyanates from polyols. Indeed, the Examiner agrees that Roy differs from the present application in that the order of mixing the asphalt component is not specified as to require addition to the isocyanate component first. As disclosed in the present Specification, a mere combination of the ingredients can produce an uncontrollable reaction which may be unfavorable to the manufacturing process. In amended Claim 1, the order of mixing is such that isocyanates are initially segregated from polyols followed by a controlled reaction upon mixing.

The Examiner uses the Tzeng reference for disclosure of operations for forming a roofing tile or ridge cap wherein a conveyor belt is provided. Tzeng also does not disclose segregation of isocyanates from the remaining ingredients. Accordingly, Claim 1 is patentable over the combination of Roy and Tzeng in that the recited features differ from cited prior art in an improved and favorable manner with respect to the order to mixing of the ingredients.

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejections under 35 U.S.C. § 103(a).

CONCLUSION

In view of the foregoing amendments and comments, it is respectfully submitted that the present application is fully in condition for allowance, and such action is earnestly solicited.

The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claims in condition for immediate allowance. Nevertheless, if any undeveloped

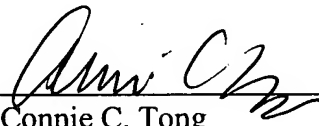
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questions remain or if any issues require clarification, the Examiner is respectfully invited to call the undersigned in order to resolve such issue promptly.

Respectfully submitted,

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